

NFS 302 Nutrition, Athletics, Performance and Behavior

Department of Nutritional Sciences, University of Toronto

2023 Winter Semester

Course Syllabus

1. Course Description:

This course will give an overview of the emerging and advancing role of chronic diet and supplements in athletics, performance, and behavior. Essentially, this course seeks to answer the question: “How should a human eat to optimize health, physical fitness and sports performance?”

2. Course Pre-requisite:

NFS 284 – Basic Human Nutrition

3. Learning Objectives:

- Acquire further knowledge and understanding of the science of human nutrition as it relates to exercise physiology, metabolism and sport performance.
- Examine the scientific basis and rationale for current nutrition recommendations for athletes and physically active people
- Explain the potential role of specific dietary supplements/ergogenic aids in optimizing physical performance and evaluate their usefulness and safety.
- Gain an awareness of the health issues and dietary challenges of athletes
- Apply acquired knowledge to identify and evaluate dietary strategies for enhancing sport performance in terms of its effectiveness and implications for health and safety.

4. Course Instructor and Teaching Assistants:

Instructor: Denis Collier, MSc
Registered Dietitian
Email: denis.collier@utoronto.ca

TAs: tba

5. Lectures & Office Hours:

Time: Thursdays from 9:00am-12:00pm

Location: PBB250 (the basement of the Leslie Dan Pharmacy Building)

I will be available for live office hours over ZOOM meetings every week. Times to be announced and could possibly vary.

6. Textbook and Readings:

There is NO REQUIRED text book for this course.

However as a review of fundamental concepts the student may benefit from referring to:

- The text book used in this course's pre-requisite: Smolin, Grosvenor, Gurfinkel. Nutrition: Science and Applications, 2012
- For a reference more specific to sports nutrition, the recommended text is Burke L and Deakin V. Clinical Sports Nutrition, 4th edition, 2010. This is available at the library
- A variety of papers from scientific journals which will be posted on Quercus each week and relevant to the lecture content for that specific week

7. Course Outline

| Week Number | Lecture Topics |
|-------------|---|
| 1: Jan.12 | "Sports, Nutrition & Critical Thinking" (plus introduction to the course) <ul style="list-style-type: none">• What makes a human good at sports?• Fallacies of logical reasoning relevant to nutrition |
| 2: Jan.19 | "Energy for Optimal Performance": <ul style="list-style-type: none">• Bioenergetics• Carbohydrates |
| 3: Jan.26 | "Building Bodies for Optimal Performance": <ul style="list-style-type: none">• Protein & Muscle• Fat & Adipose Tissue |
| 4: Feb.2 | "All About Fluids" <ul style="list-style-type: none">• Dehydration• Overhydration• Nutrition During Exercise |
| 5: Feb.9 | "Testosterone & Sports" |
| 6: Feb.16 | Mid-term exam |
| 7.Feb.20-24 | READING WEEK |
| 8: Mar.2 | Anabolic Steroids ; Nutritional Supplements Overview |
| 9: Mar.9 | "Supplements for Physical Performance" <ul style="list-style-type: none">• Creatine• Buffers |

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| | <ul style="list-style-type: none"> • Caffeine • Beetroot Juice |
| 10: Mar.16 | “Vitamins & Minerals for Physical Performance” <ul style="list-style-type: none"> • Calcium • Vitamin D • Antioxidants |
| 11: Mar.23 | Iron; RED-S |
| 12: Mar.30 | “Nutritional Timing Around Exercise”: <ul style="list-style-type: none"> • Pre-Exercise Nutrition • Post-Exercise Muscle Gain • Post-Exercise Energy Recovery |
| 13: Apr.6 | “Performance Nutrition Across the Ages”: Youth to Masters |
| TBA | FINAL EXAM |

7. Assessment

| Type | Due Date | Value |
|------------------------|--------------------|-------|
| Annotated Bibliography | Feb.2, 11:59 PM | 10% |
| Athlete Case Study | March 16, 11:59 PM | 15% |
| Research Paper | March 30, 11:59 PM | 20% |
| Mid-term Exam | Feb.16 | 25% |
| Final Exam | Tba | 30% |

8. Important Course Policies:

a) Electronic communication:

The best way to contact the instructor is by sending a direct email to: denis.collier@utoronto.ca. If you send an email through the Quercus web site, I might miss it. This email is only to be used for questions relevant to this course. The instructor cannot and will not provide answers/advice regarding personal nutritional matters.

All U of T students are required to have a valid U of T email address. You are responsible for ensuring that your U of T e-mail address is set up and properly entered in ACORN. Otherwise you will NOT be able to receive emails from your instructor as @mail.utoronto.ca addresses are the only addresses used by Quercus. You are also responsible for checking your U of T email account on a regular basis. Failure to do so is not an acceptable excuse for missing important messages.

Announcements may be periodically posted on the course website and it is the student’s responsibility to check there regularly.

b) Assignments and Turnitin Policy:

"Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site".

The statement was prepared by the University lawyers and is available on our web site on the Turnitin page, under the Conditions of Use section at:

<http://teaching.utoronto.ca/ed-tech/teaching-technology/turnitin/how-it-works>

For this course, students will be asked to submit both the annotated bibliography, athlete case study and the final research paper to Turnitin, via submission to Quercus. Though submission of your assignment to Turnitin is voluntary, there must be an alternative method of detecting possible plagiarism. For those who elect not to submit to Turnitin, as an alternative you will be expected to meet with the prof for a short oral test during which you will be asked questions about the writing of the assignment and its content. Your assignment grade may be changed based on how well you answer these questions.

All the Turnitin submissions are reviewed. Students are expected to independently work on their assignments and properly paraphrase and cite sources used for their assignments. Students will be e-mailed if there are any concerns about their writing. Often this is no more than a discussion of how to properly paraphrase and or cite references, but the deduction of marks may also result. Failure to respond to such an e-mail will result in the deduction of assignment marks. If a serious case of plagiarism is suspected, the student's assignment will be forwarded to the Office of Academic Integrity for review and possible sanction.

c) Policy Regarding Late Assignments

NO ASSIGNMENT WILL BE ACCEPTED after the due date and time, for online submissions, except for compelling reasons such as illness, personal distress, family emergency or other unforeseen circumstance. Please contact the instructor by e-mail (denis.collier@utoronto.ca) to request an extension, prior to the due date, if possible. A very brief explanation of why you are requesting an extension is required. This can be a written explanation from you or a medical certificate: <http://www.illnessverification.utoronto.ca/index.php> Verbal explanations can also be provided in virtual discussions. All information is treated as confidential. Students dealing with intense or ongoing personal distress or chronic illness, who may need special and continuing accommodation, may be asked for additional documentation and are advised to discuss their situation with their college registrar.

Please note that poor time management, having several assignments due at the same time, having to study for term tests, etc are generally NOT compelling reasons for an extension. Extensions, for such reasons, are granted only in rare situations. Students are expected to complete their assignments as best they can, hand them in on time, even if incomplete, and accept that they may not get as high a grade as they would like.

Each 24 hour increment in which you submit a late assignment will result in a 10% decrease i.e. if you submit a perfect assignment one day late, you will get 90%, 2 days late 80%, etc.

Accessibility Services: If you are registered with Accessibility Services, extensions are provided in accordance with the terms of your letter of accommodation.

d) Policy regarding assignment re-reads:

If you would like have your assignment rechecked for the way your assignment has been graded, please submit in writing a brief explanation of where you believe an oversight has occurred. You may underline or highlight the relevant portions. The portions highlighted along with the remainder of the assignment will be reviewed and **your grade can go up, down or stay the same**. Please note that the higher your initial grade, especially $> 80\%$, the less likely an upward adjustment of marks will occur.

Deadline for annotated bibliography & athlete case study: **One week after assignment is returned**. Deadline for research paper requests: **One week after assignment is returned or the date of the final exam, whichever comes first**.

e) Policy regarding missed final exam:

Policy regarding a missed final exam is determined by the Faculty of Arts and Science. If you have compelling reasons for missing your final exam, contact your college registrar to file a petition; do this quickly, there are deadlines. You must provide documentation to support your petition. If your petition is accepted you will be permitted to write a deferred exam. A deferred exam fee (approximately \$70) must be paid. **Note:** Students may lose access to courses on Quercus several months after the last day of classes, so be sure you have downloaded all documents you need to study from the course website before then.

f) Policy regarding rounding of final grades

Final grades will be rounded up to the nearest integer if they end in 0.450 or greater

Final grades ending with 0.449 or lower will be rounded down to the nearest integer

This rule will be strictly enforced with all grades **except** the following: 49%, 59%, 69%, 79%. If the first two digits of a student's grade tabulates to any of the above, the prof reserves the right to impose some increased subjectivity in the final rounding.

h) Lecture material, audio recordings and intellectual property

Please note that the lecture presentations and course materials are the intellectual property of the instructor. The distribution, transmission, reproduction or re-posting of the NFS 302 lecture materials, including audio recordings in whole or in part, is **NOT permitted** without the consent of the instructor. All students enrolled in NFS302 are permitted to use the material for personal

study. Please check with the professor re: permission for audio recordings of the lecture for personal use. Students are NOT permitted to post these audio files in any other location, except personal and private online repositories, without the permission of the course instructor. Students found in violation of this will be prosecuted to the fullest extent of the law.

i) Academic Integrity

Students are expected to conduct themselves with academic integrity. The Code of Behaviour clearly describes activities that are considered academic misconduct:

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

Students are urged to regularly review the code as ignorance of the rules is not an acceptable excuse.

Accessibility Needs: The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:
<http://www.accessibility.utoronto.ca/>